<u>IN THE CLAIMS</u>:

1. (Previously Presented) A method for the gasifying of organic containing substances and/or substance mixtures in which

a) the organic containing substances and/or substance mixtures are fed into a pyrolysis reactor in which the organic containing substances and/or substance mixtures are kept in contact with a heat carrier medium whereby a rapid pyrolysis takes place in which the organic substances are reacted into pyrolysis products whereby the pyrolysis products consist of pyrolysis gases with condensable substances and a solid residue containing carbon,

b) the solid residue containing carbon and the heat carrier medium are fed to a firing in which the residue containing carbon is fired and the heat carrier medium heated and fed again to the pyrolysis reaction,

c) the pyrolysis gases containing tar are reheated in a second reaction zone so that a gas product is obtained which has a high caloric value,

d) the pyrolysis is carried out in a moving bed reactor or a rotary drum,

e) a reactant is mixed in with the pyrolysis gases,

f) the reactant and pyrolysis gases are fed into an indirect heat exchanger in which the pyrolysis gases react with the reactant,

g) waste gases produced from the firing are fed through an indirect heat exchanger such that their heat content is utilized for the reaction of the pyrolysis gases with the reactant, and

h) ash of the solid residue which contains carbon and the heat carrier medium are removed from the firing and recycled into the pyrolysis reactor at the input end for the organic

substances and/or substance mixtures.

2. (Previously Presented) The method according to claim 1, wherein the pyrolysis is carried out at a temperature of about 550-650°C.

3. (Previously Presented) The method according to claim 1, wherein the reaction of the pyrolysis gases with the reactant is carried out at a temperature of about 900-1000°C.

4. (Previously Presented) The method according to claim 1, wherein the reaction of the pyrolysis gases with said reactant is carried out in the presence of a catalyst.

5. (Previously Presented) The method according to claim 4, wherein said catalyst includes a material selected from the group consisting of dolomite, calcite, nickel, nickel oxide, nickel aluminate, nickel spinel and mixtures thereof.

6. (Previously Presented) The method according to claim 5, wherein at least one of said catalyst is used simultaneously as the heat carrier medium in a heat carrier medium cycle.

7. (Previously Presented) The method according to claim 1, wherein the hot pyrolysis gases are dedusted before the addition of said reactant.

8. (Previously Presented) The method according to claim 1, wherein the at least one of

said catalyst is fed to the hot pyrolysis gases in an entrained flow mode and is separated out after the reaction with said reactant, and then returned to the hot pyrolysis gases.

9. (Previously Presented) The method according to claim 1, wherein the pyrolysis gases are dedusted and quenched after the reaction with said reactant.

10. (Previously Presented) The method according to claim 1, wherein a portion of the pyrolysis gas is fired and the produced heat is at least partially utilized for a process selected from the group consisting of said pyrolysis, said reaction of said pyrolysis gases with said reactant, and combinations thereof.

11. (Previously Presented) The method according to claim 1, wherein the solid residue which includes carbon and the heat carrier medium are fed to a grate firing.

Claim 12 (Canceled).

13. (Previously Presented) The method according to claim 1, wherein the heat carrier medium includes a fire-resistant material selected from the group consisting of sand, gravel, split, aluminum silicate, corundum, graywacke, quartzite, cordierite, and mixtures thereof.

14. (Previously Presented) The method according to claim 1, wherein the heat carrier medium includes molded bodies consisting of metallic balls, non-metallic balls, and combinations

thereof.

15. (Previously Presented) The method according to claim 13, wherein the heat carrier medium has a grain size of about 1-40mm.

Claim 16 (Canceled).

17. (Previously Presented) The method according to claim 1, wherein the heat exchanger includes a catalyst filling.

18. (Previously Presented) The method according to claim 17, wherein the pipes of the heat exchanger include catalytically active material.

19. (Previously Presented) The method according to claim 17, wherein the heat exchanger is assigned to a solid bed reactor with catalyst feed.

20. (Previously Presented) The method according to claim 1, wherein the heat exchanger is first connected to a filter for dedusting.

Claims 21-31 (Withdrawn).

32. (Previously Presented) A method for the gasifying organic containing materials

comprising:

a) feeding the organic containing material into a pyrolysis reactor, said organic containing material exposed to a heat carrier in the pyrolysis reactor to at least partially cause at least partial pyrolysis of said organic containing compound, said at least partial pyrolysis of said organic containing compound forming at least two pyrolysis products, said at least two pyrolysis products including pyrolysis gas and at least partially solid carbon containing residue;

b) feeding said solid carbon containing residue and said heat carrier into a firing, said at least partially solid carbon containing residue heated in said firing and forming waste gas and ash, said heat carrier being heated by said firing;

c) feeding at least a portion or said ash and said heated heat carrier from said firing to said pyrolysis reactor, said ash and said heated heat carrier being combined with said organic containing material in said pyrolysis reactor;

d) feeding said pyrolysis gas into a gas reactor to produce a product gas having a high caloric value; and

e) directing at least a portion of said waste gas from said firing to said gas reactor to at least partially heat said pyrolysis gas in said gas reactor.

33. (Previously Presented) The method as defined in claim 32, wherein said pyrolysis reactor is selected from the group consisting of a moving bed reactor, double-deck oven, or a rotary drum reactor.

34. (Previously Presented) The method as defined in claim 32, wherein said pyrolysis gas

includes condensable substances.

35. (Previously Presented) The method as defined in claim 32, wherein a reactant is fed into said gas reactor with said pyrolysis gas, at least a portion of said pyrolysis gas reacting with at least a portion of said reactant in said gas reactor.

36. (Previously Presented) The method as defined in claim 35, wherein said reactant includes steam.

37. (Previously Presented) The method as defined in claim 32, wherein said at least a portion of said waste gas at least partially fed into an indirect heat exchanger to at least partially heat said pyrolysis gas in said gas reactor, substantially all of said waste gas prevented from being mixed with said pyrolysis gas..

38. (Previously Presented) The method as defined in claim 37, wherein pipes of said indirect heat exchanger includes a catalytically active material, said waste gas at least partially contacting said catalytically active material as said waste gas passes through the pipes.

39. (Previously Presented) The method as defined in claim 38, wherein is said waste gas is at least partially dedusted prior to passing through said pipes of said indirect heat exchanger

40. (Previously Presented) The method as defined in claim 32, wherein said pyrolysis is

carried out at a temperature of about 550-650°C.

41. (Previously Presented) The method as defined in claim 32, wherein said at partial reaction of said pyrolysis gas is carried out at a temperature of about 900-1000°C.

42. (Previously Presented) The method as defined in claim 32, including the step of feeding steam into said pyrolysis reactor.

43. (Previously Presented) The method as defined in claim 32, including the step of pretreating said organic containing material prior to feeding said organic containing material into said pyrolysis reactor, said pretreating step including a step of at least partially dry said organic containing material.

44. (Previously Presented) The method as defined in claim 43, wherein said pretreating step including a step of at least partially pulverizing said organic containing material.

45. (Previously Presented) The method as defined in claim 32, wherein said at least partial reaction of said pyrolysis gas in said gas reactor is carried out in the presence of a catalyst.

46. (Previously Presented) The method as defined in claim 45, wherein said catalyst includes a material selected from the group consisting of calcium/magnesium oxide, dolomite, calcite, nickel, nickel oxide, nickel aluminate, nickel spinel and mixtures thereof.

47. (Previously Presented) The method as defined in claim 45, wherein said indirect heat exchanger includes a solid bed reactor.

48. (Previously Presented) The method as defined in claim 47, wherein at least a portion of said catalyst is fed into said gas reactor in an entrained flow.

49. (Previously Presented) The method as defined in claim 32, wherein said pyrolysis gas is at least partially dedusted prior to being fed into said gas reactor.

50. (Previously Presented) The method as defined in claim 32, wherein at least a portion of said pyrolysis gas is used as fuel to supply heat for a process selected from the group consisting of said pyrolysis, said reaction of said pyrolysis gas, said firing, and combinations thereof.

51. (Previously Presented) The method as defined in claim 32, wherein said firing includes a grate firing.

52. (Previously Presented) The method as defined in claim 32, wherein said heat carrier includes a fire-resistant material selected from the group consisting of sand, silicon, grit, gravel, split, aluminum silicate, ceramic, corundum, graywacke, quartzite, cordierite, metals mixtures thereof.

53. (Previously Presented) The method as defined in claim 32, wherein said heat carrier includes molded bodies consisting of metallic balls, non-metallic balls, and combinations thereof.

54. (Previously Presented) The method as defined in claim 32, wherein said heat carrier has an average grain size of about 1-40mm.